TETonic shift: biological roles of TET proteins in DNA demethylation and transcription.

Journal: Nat Rev Mol Cell Biol

Publication Year: 2013

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PubMed link: 23698584

Funding Grants: Generation of regulatory T cells by reprogramming

Public Summary:
In many organisms, the methylation of cytosine in DNA has a key role in silencing 'parasitic' DNA elements, regulating transcription and establishing cellular identity. The recent discovery that ten-eleven translocation (TET) proteins are 5-methylcytosine oxidases has provided several chemically plausible pathways for the reversal of DNA methylation, thus triggering a paradigm shift in our understanding of how changes in DNA methylation are coupled to cell differentiation, embryonic development and cancer.

Scientific Abstract:
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